

Euphrates in the Saqlawiya area. Allouse in the "Avifauna of Iraq" (1953) does not mention the call of the Wood Pigeon and Habbaniya is not named as a locality for the species.

Of three other species common in both countries, but represented by different geographical races in Iraq, the voices of the Magpie, *Pica pica*, and the House Sparrow, *Passer domesticus*, were indistinguishable, but the Hooded Crow, *Corvus cornix*, was less harsh and higher-pitched in Iraq. It would be interesting to know why certain species should develop call-note differences when others do not and whether these differences take the form of a cline.

Geographical Variation in the Orange Thrush *Turdus gurneyi* Hartlaub of Eastern and South Eastern Africa

by Mr. P. A. CLANCEY

Received 14th March, 1955.

The striking Orange Thrush *Turdus gurneyi* Hartlaub is an inhabitant of the moister parts of pristine forests, ranging from the coastal districts of Pondoland northwards to Mt. Kenya in Kenya Colony. Inhabiting as it does isolated forest islands on mountains throughout most of its range, it is subject to considerable geographical variation, which has been studied by many competent workers. Much published work has also been devoted to elucidating the question of its relationship to the closely allied *Turdus piaggiae* Bouvier, which differs in having an immaculate eye-ring, no bold facial patterning, and the head-top is russet and not olive-brown or grey. Recent authoritative pronouncements opine that *T. gurneyi* and *T. piaggiae*, for long considered conspecific, are separate species, both with many races, their ranges overlapping apparently only on Mt. Kenya, where *T. g. chuka* (van Someren) and *T. p. keniensis* (Mearns) occur, and in the highlands of the south-eastern Belgian Congo.

Neumann, "Journal für Ornithologie", 1906, p. 287, reviews the races as known at that time; Sclater, "Systema Avium Æthiopicarum" part ii, 1930, pp. 443-444, recognises three races of *T. gurneyi*, sens. strict.; Mackworth-Praed and Grant, "Ibis", 1937, pp. 874-877, recognise four, namely, *T. g. gurneyi* Hartlaub, 1864: Natal, South Africa; *T. g. raineyi* (Mearns), 1913: Mt. Mbololo, south-eastern Kenya Colony; *T. g. usambarae* (Neumann), 1920: Usambara Mountains, north-eastern Tanganyika Territory; and *T. g. chuka* (van Someren), 1930: Mt. Kenya, Kenya Colony. *T. g. otomitrus* (Reichenow), 1904: Rungwe district, south-western Tanganyika Territory, is placed as a synonym of the nominate subspecies. Van Someren, "Journal of the East Africa and Uganda Natural History Society", vol. xiv, 1939, pp. 77-80, reviews the East African races and describes a new one, i.e., *T. g. chyulu* (van Someren), 1939: Chyulu Mountains, southern Kenya Colony. Recent work has tended to question the sinking of *T. g. otomitrus* into the synonymy of the nominate race by Mackworth-Praed and Grant (see Chapin, "Birds of the Belgian Congo", part iii, 1953, p. 577; and Benson, "Ostrich", vol. xxi, 1, 1950, pp. 29-30), but only one race (*T. g. gurneyi*) is currently recognised from the southern portion of Nyasaland to the eastern Cape Province. Such a classification of the southern populations of the species seemed

rather unnatural in view of the extensive geographical variation accorded taxonomic recognition in the northern Tanganyika Territory—southern Kenya Colony sector of the species' wide range, and through the courteous co-operation of the Directors of the Coryndon Memorial Museum (through Mr. J. G. Williams), the Transvaal Museum (through Dr. G. Rudebeck), and the Natal Museum, Pietermaritzburg, it has recently been possible to assemble and study series of all the described races. I am also grateful to Drs. Dean Amadon and A. L. Rand for kindly sending me details of the specimens of *T. gurneyi* in the collections of the American Museum of Natural History and the Chicago Natural History Museum. As a result of this study I propose to recognise no less than seven geographical races of this thrush.

Turdus gurneyi Hartlaub was first made known to science in the year 1864 on the basis of a specimen obtained by Thomas Ayres in a forest immediately to the north of Pietermaritzburg, Natal. This forest is now much reduced in size, and is locally known as "Town Bush". *T. gurneyi* apparently no longer occurs in its type-locality, but it is still to be found in several of the larger interior forests of the province. Of the toptotypical populations I have examined four carefully preserved specimens collected personally in the Ingeli Forest, Natal-Cape Border, in September, 1951, and I have also been able to examine three additional examples from the contiguous Pondoland populations collected by H. H. Swinny in the early part of the present century. The seven specimens of the southern populations of *T. gurneyi* before me are remarkably uniform and are characterized by their generally large size (wing ♂♀ 112–116, tail 86–93 mm.) and brownish olive dorsal colouration, the crown only slightly darker than the back. These southern birds appear to differ from all other populations of the species in having no cinnamon suffusion on the rump and upper tail-coverts, and from all but those of *T. g. chuka* in their larger size, and I consider that they constitute a well-defined austral race—*T. g. gurneyi*—with a distribution ranging from the coastal forests of Pondoland, the interior forests of East Griqualand and Natal to Zululand and the south-eastern Transvaal.

Examination of two specimens from the forest at Woodbush in the northern Transvaal shows that the populations are not attributable to the nominate race. These two specimens and another one, which is similar in all respects, from the eastern highlands of Southern Rhodesia reveal characters which are clearly of racial import. Viewed in series they are seen to be altogether browner dorsally than *T. g. gurneyi*, and the rump and upper tail-coverts are a deep cinnamon-brown, while the wings and tails are distinctly tinged reddish. There are other minutiae of plumage colouration, as well as a marked tendency to smaller size (wing ♂♀ 106.5–109.5, tail 83–86.5 mm.) The presence of cinnamon on the rump and upper tail-coverts of eastern Southern Rhodesian and northern Transvaal birds was obviously noted both by Sclater, *loc. cit.*, and Roberts, "*Birds of South Africa*", 1940, p. 232, when they suggested that these populations should, perhaps, be referred to *T. g. otomitrus* of Nyasaland, but *T. g. otomitrus* has, among other differentiating criteria, the head-top darker and the tail much shorter (75–81 mm.) than the birds of the populations here considered. It is clearly evident that the populations of the northern

Transvaal and eastern Southern Rhodesian highland forests represent a distinct innominate race, which is formally described as *T. g. disruptans* mihi below.

The populations of Nyasaland, and the highlands of southern Tanganyika Territory and adjacent areas to the westward are completely isolated from the two races occurring to the south of the Zambesi River. Benson, "*Check List of the Birds of Nyasaland*", 1953, p. 54, and in his note, *loc. cit.*, recognises two racial groups of populations in Nyasaland, the southern populations being attributed to the nominate race and the northern ones to *T. g. usambarae* (sic!). Critical study of material collected at widely scattered points in Nyasaland and south-western Tanganyika Territory (Transvaal Museum collection) has failed to reveal any constant differences between the various populations. Poorly prepared native skins from south-western Tanganyika Territory and northern Nyasaland, with much of the head and neck skin badly telescoped, have aided in the forming of an erroneous impression that the populations are darker crowned than those of the south. When compared with *T. g. disruptans* Nyasaland and southern Tanganyika Territory birds are readily separable by their rather richer and more saturated upper-parts, darker, greyish, head-top, and much shorter tail, and I believe that they represent but one well-defined geographical race. For this race the name *T. g. otomitrus* (Reichenow), 1904, is available, the *Type* being from Bulongwa, near Mwaya, Rungwe district, south-western Tanganyika Territory. Recently, Verheyen, "*Exploration du Parc National Upemba, Mission de Witte*", fasc. 19, 1953, p. 548, has recorded the obtaining of this race of *T. g. gurneyi* in a gallery forest of the Upemba National Park, Katanga, southern Belgian Congo, at 1,250 meters, so that the range of *T. g. otomitrus* extends from the Katanga highlands (Upemba) eastwards to the southern highlands of Tanganyika Territory and south to the isolated montane forests of southern Nyasaland and immediately adjacent Portuguese East Africa.

The next group of populations to be considered is that found in the highlands of Uluguru and Usambara of north-eastern Tanganyika Territory. These populations have been separated as a race, *T. g. usambarae*, by Neumann (1920), the *Type* from Mlala, near Amani, in the Usambaras. Of this race I have examined three topotypes collected by R. E. Moreau and now in the collection of the Coryndon Memorial Museum. When compared with *T. g. otomitrus* birds from the Usambara Mountains show certain interesting differences, which clearly warrant the recognition of *T. g. usambarae*. Mensurally *T. g. usambarae* is similar to *T. g. otomitrus*, but the plumage colouration is rather more intense, the head-top darker ashen grey and the upper-parts generally darker, while on the ventral surfaces the orange-russet is more chromatic, but the most constant and reliable racial criterion would appear to be the shape of the bill, which is quite characteristic. The bill of *T. g. usambarae* is heavier and less gradually tapered than in its immediate geographical congeners, while van Someren, *loc. cit.*, has also placed considerable reliance on the fact that examples of *T. g. usambarae* generally have the under tail-covert a buffish white, and not white pure as in *T. g. otomitrus* and *T. g. raineyi*. This latter character, though slight, does seem to be a valid one, and is of interest on account of the fact that buffish under tail-coverts are to be found in a distant

austral racial subdivision of the species (*T. g. disruptans*). The range of *T. g. usambarae* is still imperfectly known: it occurs on the Uluguru and Usambara Mountains of north-eastern Tanganyika Territory, and according to Mackworth-Praed and Grant, *loc. cit.*, ranges in a north-westerly direction to the forests on Mts. Meru and Oldeani.

The species has not yet been taken on Mt. Kilimanjaro, but it occurs commonly in the forests of Mt. Mbololo and at other points of the Teita Range in south-eastern Kenya Colony. The populations occurring in this area differ from *T. g. usambarae* in being paler on the head-top and more golden-green on the mantle. Ventrally such birds are less fiery than *T. g. usambarae*, and the bill is longer and more slender and the tail longer (♂♀ 80–86 mm. in six specimens). For these populations Edgar Mearns (1913) has proposed the name *T. g. raineyi*, the *Type* being from Mt. Mbololo at 4400 ft. a.s.l., from which type-locality I have examined a series of six skins in the collection of the Coryndon Memorial Museum. The range of *T. g. raineyi* appears to be restricted to the forests of Mt. Mbololo and the Teita Range.

Isolated on another forested range of hills in southern Kenya Colony is the race *T. g. chyulu* (van Someren), described in 1939 from the Chyulu Mountains (hills). While the bulk of the paratypical series of twenty-two specimens is not now available in Africa, I have, nevertheless, been able to examine eight actual paratypes. I find that while *T. g. chyulu* is a fine "split" from *T. g. raineyi*, the race is valid one and worthy of recognition. Viewed under the most favourable conditions *T. g. chyulu* is found to be rather duller and greyer dorsally than *T. g. raineyi*, the cinnamon wash on the rump and upper tail-coverts vestigial in most specimens, while on the under-parts the Chyulu race is rather more yellowish. In the original description, van Someren laid much stress on other criteria, such as the reputedly buffish colouration of the under tail-coverts and a difference in the patterning of the ante-ocular surfaces, but even after the most painstaking study of many of the actual specimens used by van Someren, I am quite unable to appreciate these alleged differences. In *T. g. chyulu* the tail is again rather shorter (74–83 mm. in eight specimens)—a reversionary trend the significance of which is not appreciated at the present time.

In the forests of Mt. Kenya the most northerly in distribution of the populations of *T. gurneyi* are found. *T. g. chuka* (van Someren), described in 1930, the *Type* from Chuka on Mt. Kenya, is a very distinct form, with plumage colouration much as in *T. g. raineyi* and adjacent races, but differing from all others in its very large size (♂♀ wings 119–125, tail 88.5–90 mm.) and powerful bill. Another point to be observed in *T. g. chuka* is that the prominent white spots on the median- and secondary-coverts are as large as in the typical race.

From the discussion on the characters shown by the different populations of *T. gurneyi*, it is concluded that seven racial divisions can be recognised to advantage in our taxonomic arrangement. *T. gurneyi* would appear to be a species of tropical origin which penetrated far into southern Africa during a dispersal optimum, when suitable forests were more extensive and less fragmented in their distribution than at present. This supposition is supported by the fact that adults of the nominate race, which consists of the southern terminal populations, are completely without cinnamon

on the rump and upper tail-coverts, though this character is present in the juvenal state, whereas all tropical forms of the species have this salient plumage character in varying degree in the adult plumage. But the new knowledge that the northern and southern terminal populations are larger dimensionally and have larger white wing-spots than those of the five interposed forms, all of which have markedly shorter tails, complicates the preparation of any valid distributional history for the species at the present juncture.

In order to assist other systematic workers not equipped with material of all the described races of this highly localized species I have by means of the colour nomenclature of C. and J. Villalobos "Colour Atlas", 1947, attempted to give accurate dorsal and ventral colour diagnoses for each race recognised in this revision. The nomenclature, characters and ranges of the seven geographical races of the Orange Thrush *Turdus gurneyi* can be defined as follows:

1. *Turdus gurneyi gurneyi* Hartlaub.

Turdus gurneyi Hartlaub, "Ibis", 1864, p. 350, pl.9: Pietermaritzburg, Natal, South Africa.

Entire upper-parts brownish olive (about OÖY-4-4°), the crown slightly darker than the back. Throat, breast, sides of the body and flanks orange-russet (about 0-11-9°); flanks with light olive wash; abdomen and under tail coverts white. Wings and tail as upper-parts; median- and secondary-coverts with white pyramidal spots.

Wing (flattened) ♂♀ 112-116 (113.1), culmen from base 23-25 (24.0), tail 86-93 (88.5) mm.

(Seven specimens measured).

Range: The larger pristine temperate evergreen forests of Pondoland and East Griqualand, eastern Cape Province, and in certain of the larger untouched interior forests of Natal and Zululand and the south-eastern Transvaal. Generally rare and highly localized throughout its entire range.

2. *Turdus gurneyi disruptans*, subsp. nov.

Lighter and browner, less greenish, dorsally than *T. g. gurneyi* (about 0-5-6°), and with the rump and upper tail-coverts strongly tinged with cinnamon-brown. On under-parts rather more intensely coloured (orange-russet about 0-8-10°), and with the white on the abdominal surfaces reduced; under tail-coverts strongly tinged with buff. Wings (primaries and secondaries) and tail more reddish, less greenish, brown.

White spots on median- and secondary-coverts smaller, and outer rectrices tipped with whitish. Smaller in size.

Wing (flattened) ♂♀ 106.5-109.5 (108.0), culmen from base 23.5-24 (23.8), tail 83-86.5 (84.8) mm.

(Three specimens measured).

Type: ♀, adult. Breeding. Vumba Highlands, near Umtali, eastern Southern Rhodesia, at 5500 ft. a.s.l. in evergreen forest. 20th January, 1946. Collected by C. W. Benson. In the collection of the Transvaal Museum, Pretoria. T.M. No. 25820.

Range: Highland evergreen forests of the northern and north-eastern Transvaal and eastern Southern Rhodesia. Rare and little-known.

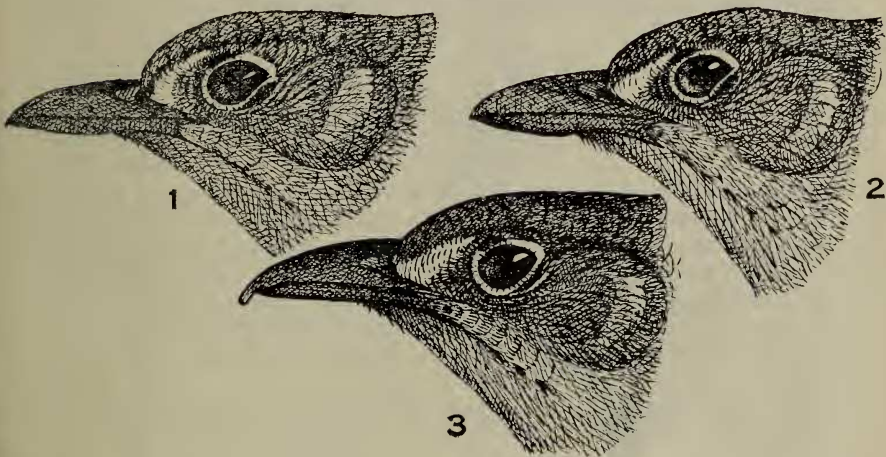
3. *Turdus gurneyi otomitrus* (Reichenow).

Geocichla gurneyi otomitra Reichenow, "Ornithologische Monatsberichte", vol. xii, 1904, p.55: Bulongwa, near Mwaya, Rungwe district, south-western Tanganyika Territory.

Differs from *T. g. disruptans* in having the head-top rather darker and greyer and not almost concolorous with the mantle, which is more saturated and somewhat greener (about 0-4-3°). Rump and upper tail-coverts more golden, less brownish, cinnamon (about 0-4-11°). Tail much shorter.

Wing (flattened) ♂♀ 103-112 (108.3), culmen from base 22.5-24 (23.2), tail 75-81 (77.8) mm.

(Eight specimens measured).



Heads of *Turdus gurneyi* showing geographical variation in the bills of certain East African races:

1. *T. g. otomitrus* (Reichenow)
2. *T. g. usambarae* (Neumann)
3. *T. g. chuka* (van Someren)

The heavy, less gradually tapered, bill of *T. g. usambarae* when compared with that of *T. g. otomitrus*, and the large bill of *T. g. chuka* should be observed.

Range: The forests of the southern highlands of Tanganyika Territory, southward to the montane forests of southern Nyasaland and adjacent Portuguese East Africa, and in the northern parts of its range west to the Katanga highlands (Upemba), Belgian Congo, and presumably in immediately adjacent parts of Northern Rhodesia. Usually at elevations of 4500 ft. a.s.l. and above, but according to Benson (1953, *loc. cit.*), occasionally in riverain forest at substantially lower altitudes.



Map of Eastern and South-eastern Africa showing geographical disposition of the races of *Turdus gurneyi*.

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|---------------------------|----------------------------|---------------------------|
| 1. <i>T. g. gurneyi</i> | 2. <i>T. g. disruptans</i> | 3. <i>T. g. otomitrus</i> |
| 4. <i>T. g. usambarae</i> | 5. <i>T. g. raineyi</i> | 6. <i>T. g. chyulu</i> |
| | 7. <i>T. g. chuku</i> | |

4. *Turdus gurneyi usambarae* (Neumann).

Geocichla gurneyi usambarae Neumann, "Journal für Ornithologie", 1920, p. 82: Mlala, near Amani, Usambara, north-eastern Tanganyika Territory.

Closely allied to *T. g. otomitrus*, but averaging slightly darker and richer on upper-parts, the head top darker and more ashen with scarcely any olive suffusion. More readily distinguishable ventrally. Orange-russet of throat, breast, sides of body and flanks darker and rather redder (about 0–8–12°); under tail-coverts usually buff. Bill more robust, less gradually tapered (*see figures*). Similar in size.

Wing (flattened) ♂♀ 106.5–111.5 (108.8), culmen from base 23–24 (23.3), tail 75.5–78 (77.1) mm.

(Three specimens measured).

Range: The forests of the Uluguru and Usambara Mountains, north-eastern Tanganyika Territory, and apparently north-westward to the montane forests of Mts. Meru and Oldeani (authority: Mackworth-Praed and Grant).

5. *Turdus gurneyi raineyi* (Mearns).

Geocichla gurneyi raineyi Mearns, "Smithsonian Miscellaneous Collections", lxi, 10, 1913, p. 4: Mt. Mbololo, east of Mt. Kilimanjaro, south-eastern Kenya Colony, at 4400 ft. a.s.l.

From *T. g. usambarae* usually separable by being paler, less saturated, dorsally; head-top lighter, more olive, less dark ashen grey, and sharply demarcated from the mantle, which is of a rather more golden-brown shade (about OY–5–8°), especially on the lower hind portion of the neck; ear-coverts paler. On under-parts very similar, but orange-russet duller, less fiery; under tail-coverts usually white. Outer webs of primaries and secondaries slightly less reddish. Bill longer and more tapered. Tail longer.

Wing (flattened) ♂♀ 107–113.5 (110.2), culmen from base 24–24.5 (24.1), tail 80–86 (82.0) mm.

(Six specimens measured).

Range: The forests of Mt. Mbololo and the Teita Range, south-eastern Kenya Colony.

6. *Turdus gurneyi chyulu* (van Someren).

Geocichla gurneyi chyulu van Someren, "Journal of the East Africa and Uganda Natural History Society", vol. xiv, 1939, p. 77: Chyulu Mountains, southern Kenya Colony, at altitudes of 5600 ft.–7200 ft. a.s.l. (No Type designated).

Slightly differentiated from *T. g. raineyi*, but constantly so. Viewed in perfect, even light duller, greyer and colder on upper-parts, and usually with less extensive and intense cinnamon-brown on rump and upper tail-coverts. Orange-russet of under-parts rather paler, more yellowish (about 0–9–11°), and the flanks are usually paler, less washed with olivaceous. Ear-coverts slightly darker. Tail averaging shorter.

Wing (flattened) ♂♀ 106–111.5 (108.7), culmen from base 23–24.5 (23.5), tail 74–83 (79.3) mm.

(Eight specimens measured).

Range: Restricted to the forests of the Chyulu Mountains, southern Kenya Colony.

7. *Turdus gurneyi chuka* (van Someren).

Geokichla gurneyi chuka van Someren, "Journal of the East Africa and Uganda Natural History Society", No. 37, 1930, p. 195: Chuka Mt. Kenya, Kenya Colony.

A well-defined race with dorsal plumage colouration much as in *T. g. raineyi* but ventrally similar to *T. g. chyulu*, and head-top even darker ashen grey than in *T. g. usambarae*. White spots on median- and secondary-coverts large, as in *T. g. gurneyi*. Size much larger than any other race, and with a pronouncedly longer bill (*see figures*).

Wing (flattened) ♂♀ 119–125 (121.8), culmen from base 26–26.5 (26.2), tail 88.5–90 (89.2) mm.

(Three specimens measured).

Range: The forests of Mt. Kenya, Kenya Colony.

Notes on South African Birds

by MR. C. W. MACKWORTH-PRAED & CAPTAIN C. H. B. GRANT

Received 5th March, 1955

A new race of Lark from South Africa.

Under this description in the Bull. B.O.C. 75, p. 23, 1955, we unaccountably failed to give a reference to Mr. J. D. Macdonald's very useful and informative paper on the "Forms of the Red-cap Lark in Southern Africa" in the Annals Transv. Mus. 22, pp. 29–32, 1952.

On the type locality of Eremialector bicinctus.

In discussing this matter (Bull. B.O.C. 75, p. 24, 1955), we should have noted that Mr. J. D. Macdonald in the Bull. B.O.C., 74, p. 6, 1954, gives Gibeon on the Great Fish River as the provisional type locality. Since the publication of his note we have been studying Levaillant's Travels and in consequence of this research it seems certain that he did not reach or see the Great Fish River, but an eastern tributary of this river now known as the Leeu River, and which on his map by Laborde was carried westwards to the sea. We therefore consider it advisable to place the type locality of this species within the area that Levaillant could have travelled north of the Orange River.

On the genus *Coracia* Brisson, Orn., 1, p.30, 1760

by MR. C. W. MACKWORTH-PRAED and CAPTAIN C. H. B. GRANT

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The genus *Coracia* of Brisson is a valid genus having been introduced with a description, but no type species can be established within Brisson's six volumes of his Ornithologie 1760, as his names are not considered as being binomial. This being so, his genera have had to be associated with a valid species name by subsequent authors.

The first author to associate a valid species name with the generic name *Coracia* Brisson, was Vieillot, N. Dict. d'Hist. Nat., 8, p. 2, 1817, who named the White-winged Chough of New Holland (New South Wales,